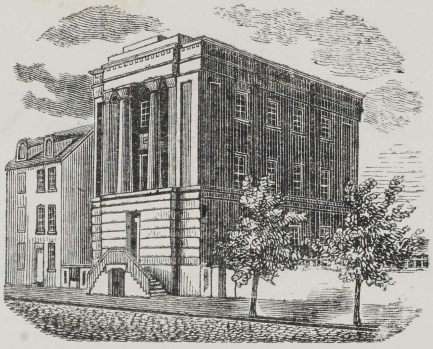
AN ESSAY ON

Malaria

RESPECTFULLY SUBMITTED TO THE FACULTY OF THE



HOMŒOPATHIC MEDICAL COLLEGE

OF PENNSYLVANIA,

On the thirtieth day of January, Eighteen Hundred and Fifty-six.

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Of Philadelphia Pennsylvania.

Malaria

Does it cause

Intermittents and Remittents?

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Philadelphia.
1856.

Malaria

Of the early history of this foe to the human race, we know nothing. But we may well suppose, that it was lurking silently over the face of our earth, when the "Prince of Darkness" first breathed that pestilential breath upon it which has wrought so fatally upon man's moral nature. We may also suppose it to have been the cause of "the pestilence that walketh in darkness," and "the destruction, that wasteth at noonday," mentioned as sometimes prevailing in ancient times. A few centuries later we find Cicero comparing the foul spirit of conspiracy aroused by Cataline to the burning fever, and Horace speaking of the noxious South winds of Autumn. What medical writers, cotemporary with them, said about it, we know not; but later medical writers speak of its prevalence in various parts of Europe, the North of Africa, and India, in some

of the forests of which, even the wild beasts flee to the hills and mountains during the season of its prevalence. Our own land also suffers from the same cause.

But what is Malaria; the supposed cause of Intermittents and Remittents? What its nature?

Dr Watson tells us, that it is a "specific poison"; and gives the following as some of the laws to which it is subject.

"First. All Malarious districts are more dangerous in the night than in the daytime."

"Second. The Malaria loves the ground."

"Third. The Malaria is movable by the wind."

"Fourth. Miasmata loose their noxious properties by passing over even a small surface of water."

"Fifth. Another remarkable property of the marsh poison is, its attraction towards, and adherence to, the foliage of umbrageous trees."

"Sixth. The production of the malarious poison

is prevented or lessened by cultivation."

We are also told that the effects of Malaria are "specific effects," and hence must proceed from a "specific poison".

Now in relation to these points the following suggestions arise. Is this poison a gas? But diffusibility is one of the properties of gases. Separate them, and they soon mingle, unless the separating medium be impervious. The immense quantities of Carbonic acid, generated in our cities, does not settle down upon them; nor does it flow off like the filth of their sewers, and stagnate in lower regions. The air of cities contains ~~but~~ a small percent more of it, than that of the open country; but it is diffused throughout the whole atmosphere, and, altho, immediately fatal to human life when found in it to the amount of one twentieth of its bulk, yet perfectly harmless in its normal

proportion. Some may contend, that this poison emanates from vegetable decomposition. But Dr Watson shows that malarious fevers have occurred in numerous regions, which were almost destitute of vegetable matter. There also numerous regions, even in warm climates, where abundant vegetable decomposition does not produce the fevers. These facts would at least render its vegetable origin doubtful.

Is it then a solid? Solids are detected in the atmosphere to the ~~1000000~~ of its bulk. They accumulate in masses, and can be examined. Odorous substances float in the air and we detect them by our sense of smell. But the "Specific poison" has never yet been detected in earth air or water.

Furthermore in regard to the "Specific effect". No one will deny that poisons produce

specific effects. The effects of Syphilitic and Small pox poisons, arsenic and a multitude of substances palpable to our senses are manifest. And what cause of disease does not produce specific effects? Cold acting upon a certain predisposed condition of the system produces Cough; acting upon another condition of the system diarhea, and again pleurites, and so to the end of the chapter. But does it, acting upon the same predisposed condition of the system under the same circumstances, produce different diseases. Doubtless not. Nor does any other cause of disease. Hence the converse of the proposition is not universally true; that specific morbid effect must be produced by a "specific poison". If it be so by them every disease is caused by a poison; and what some old women relate, as taught by the doctors, must be true, viz "Everything contains poison".

Again it may not be difficult to show, that other, not poisonous, substances are subject to some of Dr Watson's Six laws. It is well known, that during the sun's absence the earth, and atmosphere also, loose part of the heat received from Him; and as a consequence the capacity of the latter for moisture is diminished. Hence the aqueous vapor, which has ascended during the day, descends covering the ground with dew and giving to the atmosphere that penetrating chill, which only vapor can give, and which is by far more manifest in vales and low regions, where the degree of cold is greater than upon elevated regions. Every one, who has descended from a hill into the vale, or ascended from the vale, has noticed the difference in the temperature. So has every one, dwelling in a hilly region, seen the vales obscured by

fog of an Autumnal morning, when the hill top was smiling in the bright Sunbeams. And as evidence of greater cold in the low regions, we have the familiar fact, that early frosts first appear there. This fog and vapor is of course "movable by wind." But what shall we say respecting the Doctor's last three laws. Why every schoolboy, who delights in bathing, and is up with the lark to enjoy his luxury, knows how much warmer comparatively the water is than the air. How then can the air pass over "even a small portion of water," although the latter be a slow radiator of heat, without having its temperature somewhat modified? When passing among the leaves of umbragious trees the air deposits a part of its vapor and becomes less chilly. Whether the broken soil gives up its heat more

slowly, or the grown crops recive more
dew than the grass clad fields, we know
not; but it is no more difficult to sup-
pose, that they in some way modify the
temperature of the air, than it is, that
they modify some unknown poison.
Let us here notice one of the predisposing causes
of these fevers. It is in the warmer climates,
that they prevail; and in the low regions of
those climates, where the heat is the most in-
tense, and most uniform. not upon the hills
of the temperate climates, or even of the
warmer climates, where the cool and invigo-
rating breezes are found. Dr Watson teaches,
that they prevail, and are the more malignant,
the nearer we approach the equator. Like-
wise Bouchin, as stated by Dr Teste, con-
tends, that it is the degree of heat, that gives
these fevers their peculiar type.

Moreover it is in Springtime, as we are passing from winter cold to summer heat; and again in Autumn, when we are worne down by the summer heat and toil, that they prevail. Heat then is the great predisposing cause, and the times when it most effects the system and moreover when the difference between midday heat and midnight chilliness is greatest perhaps. Now if these same causes with slightly varied circumstances produce diarhea, dysentery, and cholera (Dr Small) why may they not produce intermittents and remittents. In fact there seems to be in a developing Autumnal day a striking resemblance to a paroxism of fever. First there is the cool chilly morning, without the shaking perhaps except of the rustling leaves

or waving tree tops; then comes the heat of noonday, and following it, the evening covering the whole face of Nature with its dewy sweat, which, as it is not dispelled by internal warmth, and no gigantic nurse deigns to wipe off the beaded drops from Natures brow, remains to be dissipated by the returning Sun beams.

Here then are, undoubtedly, causes sufficient to produce these fevers and causes too recurring in the same order, as the different stages of their paroxisms. One fact at least may be adduced to support this view In October of 1822. M. Brechet took at midnight a bath in the Same 7 nights in succession, increasing the length of the bath from ¼ to 1 hour. After the bath he immediately betook himself to a warm bed, and soon experienced heat, which was followed by perspiration. Upon the 8th night

the bath was omitted, but the chill came on at the usual time (Watson). The "Specific poison" is not found over water, and hence could not in this case have produced the fever.

But we have sufficiently spun our theme, to answer the end for which it is designed. We shall be "sorry enough" if we have entirely upset the doctrine of Dr Watson in regard to malaria and, of all the old Doctors, And on the other hand "glad enough" to find, that the boys of our own mind have not been merely warmed up by the medical light and heat, which has been shed upon them, to a sufficient degree to raise a fog, and obscure our mental vision, so that we cannot discover "Specific poisons".